PTO/SB/08a (07-05)
Approved for use through 07/31/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known	
Application Number	Unassigned
Filing Date	December 9, 2005
First Named Inventor	Kim et al.
Art Unit	N/A
Examiner Name	N/A
Attorney Docket Number	4240-138

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number - Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/S.M./	AA	US- 5,399,348 - - B1	03-21-1995	Anderson, W. French, et al.	
	AB	US- 5,284,756 - - B1	02-08-1994	Grinna, Lynn, et al.	
	AC	US- 6,531,450 - - B1	03-11-2003	Hotten, Gerturde, et al.	
	AD	US- 6,764,994 - - B1	07-20-2004	Hotten, Gertrude, et al.	
	AE	US- 5,187,623 - - B1	02-16-1993	Ibaraki, Atsushi	
	AF	US- 6,593,109 - - B1	07-15-2003	Israel, David and Wolfman, Neil M.	
	AG	US- 4,968,590 - - B1	11-06-1990	Kuberasampath, Thangavel and Rueger, David C.	
	AH	US- 2005/0147971 - - A1	07-07-2005	Lee, Sang-Kyou, et al.	
	AI	US- 2003/0181378 - - A1	09-25-2003	Makishima, Fusao, et al.	
	AJ	US- 5,208,219 - - B1	05-04-1993	Ogawa, Yasushi, et al.	
	AK	US- 5,258,494 - - B1	11-02-1993	Oppermann, Hermann, et al.	
	AL	US- 5,266,683 - - B1	11-30-1993	Oppermann, Hermann, et al.	
	AM	US- 5,106,626 - - B1	04-21-1992	Parsons, Thomas F., et al.	
	AN	US- 2004/0197867 - - A1	10-07-2004	Titus, Frances Louisa, et al.	
	AO	US- 4,294,753 - - B1	10-13-1981	Urist, Marchall R.	
	AP	US- 5,166,058 - - B1	11-24-1992	Wang, Elizabeth, et al.	
	AQ	US- 5,187,076 - - B1	02-16-1993	Wozeny, John M., et al.	
	AR	US- 5,106,748 - - B1	04-21-1992	Wozney, John M., et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
/S.M./	AS	PCT - -PCT/JP96/01062-- A1	10-24-1996	Makishima, Fusao, et al.		

Examiner Signature	/Stacey Macfarlane/	Date Considered	09/11/2007

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2]See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08b (07-05)
Approved for use through 06/30/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 4

Complete If Known	
Application Number	Unassigned
Filing Date	December 9, 2005
First Named Inventor	Kim et al.
Art Unit	N/A
Examiner Name	N/A
Attorney Docket Number	4240-138

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/S.M./	AT	BERNSTEIN, EMILY, ET AL., Role for a bidentate ribonuclease in the initiation step of RNA interference, Nature, January 2001, Page(s) 363-366, Volume 409	
	AU	CONSTAM, D.B. AND ROBERTSON, E.J., Regulation of bone morphogenetic protein activity by pro domains and proprotein convertases, Journal of Cell Biol., January 1999, Page(s) 139-149, Volume 144, Number 1	
	AV	CUI, Y., ET AL., The activity and signaling range of mature BMP-4 is regulated by sequential cleavage at two sites within the prodomain.., Genes Dev., November 2001, Page(s) 2797-2802, Volume 15, Number 21	
	AW	DEGNIN, CATHERINE, ET AL., Cleavage within the prodomain direct intracellular trafficking and degradation of mature bone morphogenetic protein-4, Mol. Cell Biol., November 2004, Page(s) 5012-5020, Volume 15, Number 11	
	AX	DERYNCK, RIK AND ZHANG, YING E., Smad-dependent and smad-independent pathways in TGF-beta family signalling, Nature, October 2003, Page(s) 577-584, Volume 425	
	AY	GANJU, A., Isthmic spondylolisthesis, Neurosurg Focus, July 2002, Page(s) E1, Volume 13, Number 1	
	AZ	GRIFFITH, D.L., ET AL., Three-dimensional structure of recombinant human osteogenic protein 1: structural paradigm for the transforming growth.., Proceeding of the National Academy of Sciences USA, January 1996, Page(s) 878-883, Volume 93, Number 2	
	BA	JEAN, F., ET AL., Alpha1-Antitrypsin Portland, a bioengineered serpin highly slective for furin: application as an antipathogenic agent, Proceedings of the National Academy of Science USA, June 1998, Page(s) 7293-7298, Volume 91, Number 13	
	BB	KALLURI, R. AND NEILSON, E.G., Epithelial-mesenchymal transition and its implication for fibrosis, Journal of Clinical Investigation, December 2003, Page(s) 1776-1784, Volume 112, Number 12	
	BC	NAGAHARA, HIKARU, ET AL., Transduction of full-length TAT fusion proteins into mammalian cells: TAT-p27Kip1 induces cell migration, Nature Medicine, December 1998, Page(s) 1449-1452, Volume 4	

Examiner Signature	/Stacey Macfarlane/	Date Considered	09/11/2007

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
[1]Applicant's unique citation designation number (optional). [2]Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/08b (07-05)
Approved for use through 06/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 3 of 4

Complete If Known	
Application Number	Unassigned
Filing Date	December 9, 2005
First Named Inventor	Kim et al.
Art Unit	N/A
Examiner Name	N/A
Attorney Docket Number	4240-138

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/S.M./	BD	REDDI, A.H., Bone morphogenetic protiens: from basic science to clinical applications, J Bone Joint Surg Am., 2001, Page(s) S1-6, Volume 83-A Suppl 1, Number Pt 1	
	BE	RUPPERT, R., ET AL., Human bone morphogenetic protein 2 contains a heparin-binding site which modifies its biological activity, Eur. J. Biochem., April 1996, Page(s) 295-302, Volume 237, Number 1	
	BF	SCHEUFLER, C., ET AL., Crystal structure of human bone morphogenetic protein-2 at 2.7 A resolution, Journal of Mol. Biol., March 1999, Page(s) 103-115, Volume 287, Number 1	
	BG	SCHWARZ, DIANNE S., ET AL., Asymmetry in the assembly of the RNAi enzyme complex, Cell, October 2003, Page(s) 119-208, Volume 115	
	BH	SCHWARZE, STEVEN R., ET AL., In vivo protein transduction: delivery of a biologically active protein into the mouse, Science, September 1999, Page(s) 1569-1572, Volume 285, Number 5433	
	BI	SCHWARZE, S.R., ET AL:, Protein transduction: unrestricted delivery into all cells?, Trends Cell Biol., July 2000, Page(s) 290-295, Volume 10, Number 7	
	BJ	STORM, ELAINE E., ET AL., Limb alterations in Brachypodism mice due to mutation in a new member of the TGFbeta-superfamily, Nature, April 1994, Page(s) 639-643, Volume 368	
	BK	THOMAS, GARY, Furin at the cutting edge: from protein traffic to embryongenesis and disease, Nature Reviews Molecular Cell Biology, October 2002, Page(s) 753-766, Volume 3, Number 10	
	BL	WADIA, J.S. AND DOWDY, S.F., Modulation of cellular function by TAT mediated transduction of full length proteins, Curr Protein Pept Sci, April 2003, Page(s) 97-104, Volume 4, Number 2	
	BM	WANG, E.A., ET AL., Recombinant human bone morphogenetic protein induces bone formation, Proceedings of the National Academy of Sciences USA, March 1990, Page(s) 2220-2224, Volume 87, Number 6	

Examiner Signature	/Stacey Macfarlane/	Date Considered	09/11/2007

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
[1]Applicant's unique citation designation number (optional). [2]Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Approved for use through 06/30/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 4 of 4

	Complete If Known
Application Number	Unassigned
Filing Date	December 9, 2005
First Named Inventor	Kim et al.
Art Unit	N/A
Examiner Name	N/A
Attorney Docket Number	4240-138

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/S.M./	BN	YAMASHITA, HIDETOSHI, ET AL., Growth/Differentiation Factor-5 induces angiogenesis in vivo, Experimental Cell Research, August 1997, Page(s) 218-226, Volume 235, Number 1	
/S.M./	BO	ZEISBERG, MICHAEL, ET AL., BMP-7 counteracts TGF-beta 1-induced epithelial-to-mesenchymal transition and reverses chronic renal injury, Nature Medicine, 2003, Page(s) 964-968, Volume 9	
/S.M./	BP	ZEISBERG, MICHAEL, ET AL., Bone morphongenic protein-7 induces mesenchymal to epithelial transition in adult renal fibroblasts and facilitates ..., Journal of Biol. Chem., March 2005, Page(s) 8094-8100, Volume 280, Number 9	

Examiner Signature	/Stacey Macfarlane/	Date Considered	09/11/2007

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
[1]Applicant's unique citation designation number (optional). [2]Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.